yearly mammogram," "once a cesarean section, always a cesarean section," and other clinical pearls passed down through hospital rounds and textbooks. Popular examples of formal policies include the United States Preventive Services Task Force's *Guide to Clinical Preventive Services,* the cancer screening recommendations from the American Cancer Society, and the findings of any National Institutes of Health consensus conference. Any clinical policy—for example, the one on cesarean deliveries—may need modification when more data become available.

Clinical policies can be based on one of two approaches. In a consensus conference, experts meet to discuss the current state of knowledge. The evidence and exact rationale for the experts' recommendations are often obscure. More recently, an explicit approach has increased in popularity. This is important because the explicit approach allows clinicians to determine how to apply a policy to patients in their practice.

The explicit approach requires knowledge in three areas: all relevant health effects, including benefits and harms; all financial costs and savings; and patient preferences. Usually an extensive literature review serves as the source of all data, but occasionally new data are developed. Patient preferences for the various treatment options or outcomes are assessed. Finally, the data are formally analyzed and the recommendations published. The explicit approach, while resulting in high-quality recommendations, is expensive. Developing a high-quality policy generally takes thousands of hours over two to three years.

A scheme has been suggested for rating the flexibility of a clinical policy, that is, how strong the recommendation should be. A policy is a "standard" if the consequences are well known and there is virtual patient unanimity about the value of the recommendation. Few guidelines carry this strict level of flexibility. The policy on treating severe hypertension can be considered a standard. A policy is a "guideline" if the consequences are sufficiently understood to permit decisions and the recommendation is preferred by many but not all patients. The policy on mammography after age 50 years is a guideline. A policy is an "option" if the outcomes or patient preferences are not known or if patients are either evenly divided or indifferent. The policy on treating moderate hypercholesterolemia is considered an option because of the lack of data on patient preferences as well as current controversies over the possible adverse effects of lowering cholesterol levels.

The perceived rigidity of clinical policies causes many physicians to resist the entire movement, fearing that such rigidity will interfere with the patient-physician interaction. By incorporating a flexibility rating, however, these clinical policies offer physicians the latitude to use clinical judgment while identifying those recommendations with clear and powerful evidence. Certain potential concerns related to clinical policies are well founded, and the American Academy of Family Physicians is a leader in the field to help protect patients from the misuse of these policies by nonclinicians. Still, the comprehensive assessment of a clinical problem afforded by a clinical policy can give physicians insight into the optimal care of patients.

THEODORE G. GANIATS, MD
La Jolla, California

REFERENCES

Eddy DM: Clinical decision making: From theory to practice—Designing a practice policy: Standards, guidelines, and options. JAMA 1990; 263:3077, 3081, 3084

Eddy DM: Clinical decision making: From theory to practice—Guidelines for policy statements: The explicit approach. JAMA 1990; 263:2239-2240, 2243

Hirshfeld EB: Should practice parameters be the standard of care in malpractice litigation? JAMA 1991; 266:2886-2891

US Preventive Services Task Force: Guide to Clinical Preventive Services. Baltimore, Md, Williams & Wilkins, 1989

Universal Hepatitis B Childhood Vaccinations

THE CENTERS FOR DISEASE CONTROL AND PREVENTION Immunization Practices Advisory Committee recommended universal childhood hepatitis B immunizations in November 1991. The initial reaction by physicians and the various professional societies was guarded, but most professional organizations have now made similar recommendations.

Hepatitis vaccine was introduced in 1982. Early hepatitis B vaccination efforts focused on high-risk populations. Despite these efforts, it is estimated that 200,000 to 300,000 new cases occur each year in the United States. Each year nearly 5,000 people die of chronic liver disease due to hepatitis B virus (HBV), and more than a million people have chronic infection and are potentially infectious to others. The immunization of high-risk groups will remain a cornerstone of efforts to control this disease until universal childhood immunization results in control.

Infants and children younger than 5 years have special risks related to HBV infection. Infants infected in the perinatal period have a 90% risk of chronic infection. Those not infected at birth from infected mothers remain at high risk for acquiring the infection. In addition, horizontal person-to-person transmission has been shown to occur among children in populations where HBV is endemic. Children infected in the first five years of life have as much as a 60% risk of becoming carriers. It is estimated that 25% of children with chronic HBV infection will die of chronic liver disease as adults.

Each person in the United States faces a 5% lifetime risk of HBV infection. This risk makes universal vaccination of infants probably cost-effective when comparing the cost of vaccine and its administration with the medical and work-loss costs associated with the disease. It has been estimated that each dollar spent on vaccination will save between $7 and $14 in medical and work-loss costs.

Several schedules have been recommended depending on the HBV status of the mother, the vaccine used, and individual vaccination practices. Generally half the adult dose (a fourth to half for Recombivax HB) is administered at birth (with hepatitis B immune globulin given if

the mother is HBV infected). The second dose is administered a month or two later, and the third dose four or more months thereafter to obtain optimal antibody levels. The question of the need for a booster dose is not resolved, but protective levels of antibody are present for at least five years. The possible need for booster doses will be assessed as additional information becomes available.

Effective December 1, 1992, and January 1, 1993, respectively, California and Nevada Medicaid programs began paying the costs of childhood hepatitis B vaccination.

GEORGE H. HESS, MD
Reno, Nevada

REFERENCES

Alter MJ, Hadler SC, Margolis HS, et al: The changing epidemiology of hepatitis B in the United States: Need for alternative vaccination strategies. JAMA 1990; 263:1218-1222

American Academy of Family Physicians Commission on Public Health and Scientific Affairs: Recommendations for Hepatitis B Preexposure Vaccination and Postexposure Prophylaxis—AAFP Reprint No. 529. Kansas City, Mo, AAFP, August 1992

American Academy of Pediatrics Committee on Infectious Diseases: Universal hepatitis B immunization. Pediatrics 1992; 89:795-800

Centers for Disease Control: Hepatitis B virus: A comprehensive strategy for eliminating transmission in the United States through universal childhood vaccination—Recommendations of the ACIP. MMWR 1991; 40(RR-13):1-25

Increased Surgical Options for Dysfunctional Uterine Bleeding

HYSTERECTOMY FOR DYSFUNCTIONAL uterine bleeding remains a common and expensive treatment. Because 50% of the uteruses removed for this reason are histologically normal, techniques are being developed to treat the target tissue, the endometrium, rather than remove the entire organ.

Endometrial ablation has been studied for more than 100 years, but technologic improvements in the past 10 to 15 years have now shown consistent results with low morbidity. First, instruments for endometrial aspiration done in the office have shown results equal to those of dilatation and curettage in the diagnosis of endometrial carcinoma. Second, hysteroscopy now permits direct visualization of the endometrium to ensure thorough ablation. Third, laser or electrosurgical devices provide effective and safe ablation.

The laser techniques cauterize the endometrium while the procedure is viewed through the hysteroscope. A review of the results of different studies over the past decade involving more than 1,000 patients showed an 88% to 97% success rate, with failure being defined as requiring a subsequent procedure or a hysterectomy. Electrosurgical equipment such as a urologic resectoscope (such as used for transurethral resection of the prostate) or a roller-ball electrode may also be used. Both use electrical current to cauterize the endometrium down to the basement membrane. Several studies, with results from hundreds of patients, reported success rates of 86% to 97.5%. The resectoscope also gathers tissue for histologic study and can be used to remove small submucosal fibroids.

Endometrial ablations can be done as outpatient procedures with shorter recovery times than for hysterectomies. As their availability increases throughout the country, primary care physicians will be able to offer patients procedures that are less uncomfortable, disruptive, and costly than a hysterectomy when medical therapy is unsuccessful.

DAVID M. BAUGHAN, MD
San Diego, California

REFERENCES

Garry R, Erian J, Grochmal SA: A multi-centre collaborative study into the treatment of menorrhagia by Nd-YAG laser ablation of the endometrium. Br J Obstet Gynaecol 1991; 98:357-362

Ke RW, Taylor RJ: Endometrial ablation to control excessive uterine bleeding. Hum Reprod 1991; 6:574-580

Magos AL, Baumann R, Lockwood GM, Turnbull AC: Experience with the first 250 endometrial resections for menorrhagia. Lancet 1991; 337:1074-1078

VanDamme JP: One-stage endometrial ablation: Results in 200 cases. Eur J Obstet Gynecol Reprod Biol 1992; 43:209-214

Changing Guidelines for Screening Mammography

BREAST CANCER is the most common cancer among women in the United States with each year about 175,000 new cases diagnosed and 44,000 deaths. Recommendations for screening mammography in asymptomatic women are made with the goal of reducing mortality through early detection and intervention.

Since 1980, the American Cancer Society (ACS) in conjunction with the National Cancer Institute has recommended yearly mammography for asymptomatic women older than 50 years. Controversy has surrounded recommendations for screening women from 40 to 49 years. Concerns have included a marginal cost-benefit ratio and lack of data to support decreased mortality among younger women when cancer is found by mammography. Supporters of annual screening in this age group point to the relative aggressiveness of cancer that occurs in younger women.

In 1983, based on data from the joint ACS/National Cancer Institute Breast Cancer Detection Demonstration Project and long-term follow-up from the Health Insurance Plan of New York study, the ACS guidelines were revised to include screening mammography every one to two years from 40 to 49 years of age. At that time, the ACS also recommended a baseline mammogram for future comparison for women between ages 35 and 39.

Guidelines were again revised by the ACS and published in August 1992 after a consensus meeting of 12 health care organizations was convened by the American College of Radiology to develop a uniform set of recommendations for breast cancer screening. The new guidelines reconfirm the use of screening mammograms on a yearly basis for women older than 50 and every one to two years for women from 40 to 49 years old.

Not all organizations have endorsed the recommendations for screening women younger than 50 years. The United States Preventive Services Task Force does not endorse routine mammography for women aged 40 to 49 unless they fall into a high-risk category based on family history. The recently published five-year follow-up